

Attorney's Docket No.: 16459-012

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Alexei A. Erchak

Art Unit: 2811

Serial No.: 10/724,005

Examiner: Ori Nadav

Filed

: November 26, 2003

Title

: LIGHT EMITTING DEVICES

## Mail Stop Amendment

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT

Applicants submit the references listed on the attached form PTO-1449. Applicants also bring to the Examiner's attention the below listed 14 pending U.S. utility patent applications that are owned by the Assignee of the above-noted patent application.

Document Number	Patentee	Filing Date
10/724,004	Alexei A. Erchak et al	11/26/03
10/723,987	Alexei A. Erchak	11/26/03
10/724,033	Alexei A. Erchak	11/26/03
10/724,006	Alexei A. Erchak	11/26/03
10/724,029	Alexei A. Erchak	11/26/03
10/724,015	Alexei A. Erchak	11/26/03
10/735,498	Alexei A. Erchak	12/12/03
10/794,244	Alexei A. Erchak	3/5/04
10/794,452	Alexei A. Erchak	3/5/04
10/872,335	Alexei A. Erchak et al.	6/18/04
10/896,606	Alexei A. Erchak et al.	7/22/04
10/871,877	Alexei A. Erchak et al	6/18/04
10/872,336	Alexei A. Erchak et al.	6/18/04
10/896,435	Alexei A. Erchak et al.	7/22/04

10/20/2004 SSITHIB1 00000001 10724005

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## CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.Q. Box 1450, Alexandria, VA 22313-1450.

Date of Deposit

Signature

Irja Zarembok

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Applicant: Alexei A. Erchak Serial No.: 10/724,005

Filed: November 26, 2003

Page : 2 of 2

This statement is being filed after a first Office action on the merits, but before receipt of a final Office action or a Notice of Allowance. A check for \$180 in payment of the late submission fee of §1.17(p) is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Attorney's Docket No.: 16459-012001

Date: 10[14]04

Sean P. Daley / Reg. No. 40,978

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Substitute Form PTO-1449 (Modified)

ent of Commerce d Trademark Office Attorney's Docket No. 16459-012001

Application No. 10/724,005

**Information Disclosure Statement by Applicant** (Use several sheets if necessary)

Applicant Alexei A. Erchak

(37 CFR §1.98(b))

Filing Date **Group Art Unit** 2811 November 26, 2003

			U.S. Pate	ent Documents			
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,359,345	10/25/94	Hunter et al.			
	AB	5,631,190	05/20/97	Negley et al.			
	AC	5,724,062	03/03/98	Hunter et al.			
	AD	5,799,924	07/14/98	Krames et al.			
	AE	5,955,749	09/21/99	Joannopoulos et al.			-
	AF	6,071,795	06/06/00	Cheung et al.		1	
	AG	6,420,242	07/16/02	Cheung et al.			
	AH	6,559,075	05/06/03	Kelly et al.			
	AI	6,410,942	06/25/02	Thibeault et al.		-	
	AJ	6,657,236	12/02/03	Thibeault et al.			
	AK	2003/0141507	07/31/03	Krames et al.			
	AL	5,633,527	05/27/1997	Lear			02/06/95
	AM	5,363,009	11/8/1994	Monto			08/10/92
	AN	5,073,041	12/17/1991	Rastani			11/13/90
	AO	5,426,657	06/20/1995	Vakhsoori			05/27/94
	AP	6,091,085	07/18/00	Lester			02/19/98
	AQ	6,469,324	10/22/02	Wang, Tien Yang			
	AR	6,287,882	09/11/01	Chang et al.			
	AS	5,793,062	08/11/98	Kish et al.			

	Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or			Trans	slation
Initial	ID	Number	Date	Patent Office	Class	Subclass	Yes	No
	AT	WO 98/14986	04/09/98	PCT				

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner Initial	Desig. ID	Document
	AU	W.S. Wong et al. "Damage-free separation of GaN thin films from sapphire substrates", Appl. Phys. Lett. 72 (5), February 2, 1998, pages 599-601

Examiner Signature
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Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-144 epartment of Commerce (Modified) Patent and Trademark Office	Attorney's Docket No. 16459-012001	Application No. 10/724,005	
Information Disclosure Statement by Applicant	Applicant Alexei A. Erchak		
(Use several sheets if necessary) (37 CFR §1.98(b))	Filing Date November 26, 2003	Group Art Unit 2811	

	Other D	ocuments (include Author, Title, Date, and Place of Publication)
Examiner	Desig.	
Initial	ID	Document
	AV	M.K. Kelly et al. "Optical process for liftoff of Group III-nitride films", Physica Status Solidi; Rapid . Research Note, November 28, 1996, 2 pages.
	AW	A. A. Erchak et al. "Enhanced coupling to vertical radiation using a two-dimensional photonic crystal in a semiconductor light-emitting diode", Appl. Phys. Lett. (78 (5), January 29, 2001, pages 563-565
	AX	P.L. Gourley et al. "Optical properties of two-dimensional photonic lattices fabricated as honeycomb nanostructures in compound semiconductors", Appl. Phys. Lett. 64(6), February 7, 1994, pages 687-689
	AY	P.L. Gourley et al. "Optical Bloch waves in a semiconductor photonic lattice", Appl. Phys. Lett. 60 (22), June 1, 1992, pages 2714-2716
	AZ	J.R. Wendt et al. "Nanofabrication of photonic lattice structures in GaAs/AIGaAs", J.Vac. Sci. Technol. B 11(6), November/December 1993, pages 2637-2640
	AAA	M. Krames et al "Introduction to the Issue on High-Efficiency Light-Emitting Diodes", IEEE Journal on selected topic in quantum electronics, Vol. 8, No. 2 March/April 2002, pages 185-188
	ABB	K. Streubel et al "High Brightness AlGaInP Light-Emitting Diodes", IEEE Journal on selected topic in quantum electronics, Vol. 8, No. 2, March/April 2002, pages 321-332
	ACC	M. Okai et al. "Novel method to fabricate corrugation for a λ/4-shifted distributed feedback laser using a granting photomask", Appl. Phys. Lett. 55(5), July 31, 1989, pages 415-417
	ADD	T.L. Koch et al. "1.55-µ InGaAsP distributed feedback vapor phase transported buried heterostructure lasers", Appl. Phys. Lett. 47 (1), July 1, 1985, pages 12-14
	AEE	W.T. Tsang et al. "Semiconductor distributed feedback lasers with quantum well or superlattice grating for index or gain-coupled optical feedback", Appl. Phys. Lett. 60 (21), May 25 1992, pages 258-2582
	AFF	M. Zelsmann et al. "Seventy-fold enhancement of light extraction from a defectless photonic crystal made on silicon-on-insulator", Appl. Phys. Lett. 83 (13), September 29, 2003, pages 2542-2544
	AGG	M. Rattier et al. "Omnidirectional and compact guided light extraction from Archimedean photonic lattices", Appl. Phys. Lett. 83 (7), August 18, 2003, pages 1283-1285
	АНН	YJ. Lee et al. "A high-extraction-efficiency nanopatterned organic light-emitting diode", Appl. Phys. Lett. 82(21), May 26, 2003, pages 3779-3781
	AII	I. Schnitzer et al. "30% external quantum efficiency from surface textured, thin-film light-emitting diodes", Appl. Phys. Lett. 63 (18), October 18, 1993, pages 2174-2176
	AJJ	M. Boroditsky et al. "Light extraction from optically pumped light-emitting diode by thin-slab photonic crystals", Appl. Phys. Lett. 75 (8), August 23, 1999, pages 1036-1038
	AKK	L. Chen et al. "Fabrication of 50-100 nm Patterned InGaN Blue Light Emitting Heterostructures", Phys. Stat. Sol. (a), 188 (1), 2001, pages 135-138.
	ALL	I. Bulu et al. "Highly directive radiation from sources embedded inside photonic crystals", Appl. Phys. Lett. 83 (16), October 20, 2003, pages 3263-3265
	AMM	T. N. Oder et al. "III-nitride photonic crystals", Appl. Phys. Lett. 83 (6), August 11, 2003, pages 1231-1233
	ANN	M.K. Kelly et al. "Optical patterning of GaN films", Appl. Phys. Lett 68 (12), September 16, 1996, pages 1749-1751

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if no next communication to applicant.	t in conformance and not considered. Include copy of this form with